CHAPTER OVERVIEW

This chapter will explain briefly some health problems, which may be existent in the families we serve and also provide information on keeping children healthy.

Introduction

Deficiencies in the health of children are often associated with maltreatment. This may involve neglect of standard preventive health practices, activities that are potentially harmful to the health of the child, and neglect of treatment of disease conditions.

There is a lot parents can do to keep their child healthy. A parent should provide well balanced meals, good hygiene, and opportunity for proper rest and exercise. A parent is also responsible for providing the opportunity for regular checkups, immunizations and recognizing signs of illness and special needs.

Children's Service Workers are not expected to diagnose health conditions. They should be aware of the signs of health problems so they can refer the children to proper health providers. To help workers be aware of certain health conditions in families, this section will explain briefly some health problems, which may be existent in the families we serve and also provide information on keeping children healthy.

Food Selection and Preparation

Proper nutrition is not only a function of the quantity of food available to the family but the types of foods served. Nutrition is relevant to the health of children and improper nutrition is associated with many social interaction and developmental problems. The Children's Service Worker should pay close attention to:

- The nutritional knowledge of the individual who prepares food for the family, including knowledge of basic food groups, foods supplying basic vitamins and minerals, harmful substances in excess such as salt and sugar;

- The actual food typically served in the family with special concern for patterns of foods that exclude sufficient protein and complex carbohydrates or substitute high sugar, salt and fat, "junk" foods for balanced meals;

- Dietary patterns lacking foods high in iron and calcium; this is especially important in children at high risk of lead poisoning since they are made more susceptible by iron and calcium deficiencies.

- The manner in which the food is prepared. Safe food handling practices can minimize the risk of food borne illnesses. The family may need to be taught the importance of clean utensils and hands, proper storage, and other precautions to prevent salmonella food poisoning.

Familiarity with the amounts and types of foods consumed by the family will be a help in determining whether there are gross nutritional deficiencies in the family's diet. Such deficiencies may be a result of ignorance about purchasing and preparing foods.

More long-lasting deficiencies may result in malnutrition. In these cases the diet is seriously deficient on a regular basis and may be translated into visible health problems for the children. Signs will include stunted growth and anemia. Children with nutritional deficiencies may show other behavioral problems including: poor attention span, hyperactivity, lethargy, poor achievement in school, frequent illnesses, etc. Diagnoses of malnutrition should, of course, be left to qualified professionals.

A standard means for determining the adequacy of diet quickly is the 24-hour diet recall. Normally this should be done by someone properly trained, since the determination of the quantity of particular foods eaten can be critical. The Children's Service Worker can obtain some idea of the adequacy of the diet, however, by simply asking what was eaten at meals and at snacks and in roughly what quantity during the last 24 hours.

Good nutrition includes foods from the six basic food groups. The following information gives guidelines for each group, including number of servings, nutritional values and serving sizes. Keep in mind these are the recommended allowances for adults. Children will require lesser amounts.

- Bread, Cereal, Rice, and Pasta: 6-11 Servings
  These foods provide complex carbohydrates, an important source of energy. They also provide B vitamins, minerals, and fiber. Starchy foods are not fattening if you don't add butter, cheese, or cream sauces. Select whole grain products to maximize fiber and other nutrients.
  1 serving = 1 slice of bread; 1 ounce of ready-to-eat cereal; ½ cup cooked cereal, rice or pasta.

- Fruits: 2-3 Servings
  Fruits are rich sources of vitamins, most notably vitamin C. They are low in fat and calories. Select fresh fruits and fruit juices, and frozen, canned, or dried fruits. Avoid fruit processed with heavy syrups and sugar-sweetened juices.
  1 serving = 1 medium apple, banana, or orange (small for children); 1 melon wedge; ½ cup of chopped fruit or berries; ¾ cup fruit juice (one half cup for children).

- Vegetables: 3-5 Servings
  Vegetables provide vitamins (especially A and C), are excellent sources of fiber, and are naturally low in fat. For maximum nutrients, select dark leafy greens, deep yellow or orange vegetables, and starchy vegetables like potatoes and yams.
  1 serving = 1 cup raw leafy greens; ½ cup other vegetables chopped; ¾ cup vegetable juice. Smaller portions for children.

- Meat, Poultry, Fish, Dry Beans, Eggs, and Nuts: 2-3 Servings
  Animal foods are excellent sources of protein, iron, zinc, and B vitamins, as are beans, nuts, and seeds. Tofu (made from soybeans) and white beans also supply calcium. Some seeds, like almonds, are good sources of vitamin E.
  1 serving = 2-3 ounces of cooked lean meat, poultry, or fish; 2 eggs; 1 cup cooked beans; ½ cup seeds and nuts. For children, 1 serving = 1 ounce.

- Milk, Yogurt, and Cheese: 2-4 Servings
  Milk products are the richest sources of calcium. They also provide protein and vitamin B12. Choose low-fat varieties to keep calories, cholesterol, and saturated fat at a minimum.
  1 serving = 1 cup of milk or yogurt, 1-1/2 ounces of cheese. Children should have 5 to 6 ½ cup servings, or 2½ - 3 cups per day.

- Fats, Oils, and Sweets: Use Sparingly
  These foods provide calories, but little else nutritionally. Exceptions are vegetable oil, which is a rich source of vitamin E (1 tablespoon is all you need), and molasses, an excellent source of iron.

The WIC (Women, Infant, and Children) program provides nutrition education, food packages, and makes referrals to other health services as needed. Pregnant, postpartum and breastfeeding women, infants, and children under the age of five must meet two qualifying requirements: nutritional or medical risk and income guidelines. There are over 200 offices in Missouri, with at least one in each county. Any child who is eligible for Medicaid or Food Stamps should be referred to the WIC program for an assessment of nutritional need.

Nutritional Services

Services to assist families in obtaining and preparing nutritious meals may include:

- Education on the subject provided by the Children's Service Worker (or other resource) in the family's home. This may include teaching and role modeling good shopping practices and safe food preparation;

- Referral to the Family Support Division (FSD) for food stamp eligibility determination and to other community food resources, such as the Community Action Agencies and local food banks;

- Homemaker or parent-aide services if the problem is basically one of ignorance of nutrition and food preparation. Many Extension offices provide in-home education through the Food Nutrition Education Program (FNEP);

- Head Start, day care or day treatment can also be used as a means of obtaining at least one good meal for the child during the day;

- Home-based family-centered services if there are other problems present that endanger the child;

- Referral to the county health department for dietary assessment and education in counties where available;

- Referral to the WIC program for food and nutritional education.

Rest and Personal Hygiene

Good personal and home hygiene habits help fight disease-causing germs. Children should begin brushing their teeth by age 2 1/2 - 3 years and should begin regular dental checkups. Children should learn to keep their bodies clean on a regular basis and later learn to use deodorants. Homes should be clean to eliminate pests, which carry diseases. A regimen of cleaning the home, washing dirty dishes, doing laundry, should be established to provide for a healthy environment.

Parents should establish regular bed times for children. Naps are necessary for pre-school children. Children who do not get outside and play regularly are not getting the exercise they need to help build muscle and improve coordination.

Physician Visits or Well-Child Conferences

Children should receive regular medical check-ups. The Children's Service Worker should inquire whether the child has regular well-baby or well-child checkups by a physician or other health care provider (i.e., nurse, nurse practitioner, physician assistant, etc.).

Normally, a physician or other qualified health care provider should see infants every three to four months.

Children between the age of one and two should be seen at least twice. This frequency will be required for standard immunizations.

Children between the ages of two and six years of age should have a well-child check at least once per year.

Recommended medical screening during each of the following ages:

0-4 weeks (at birth)	3 years
2-3 months	4 years
4-5 months	5 years
6-8 months	6-7 years
9-11 months	8-9 years
12-14 months	10-11 years
15-17 months	12-13 years
18-23 months	14-15 years
2 years	16-21 years

Dental screenings: Twice each year, starting by age three.

Immunizations

Regular checkups provide an opportunity for the child to receive his/her immunization on schedule.

This section should be viewed in conjunction with the previous section on physician visits. It is not identical to well-child visits, however, since immunizations may be obtained in other ways.

A family history of immunizations may be difficult or impossible to obtain. It is important, however, since 15 to 20 percent of preschool children in Missouri in any one year have not obtained their full series of immunization shots. Lack of proper immunizations may be serious when occurring in conjunction with other forms of medical neglect.

Immunizations include vaccinations for polio, diphtheria-pertussis-tetanus (DPT), measles, rubella, mumps and influenza. Immunizations are available through local health departments. A chart of immunizations is included below, as a help to the Children's Service Worker.

A physician should set the schedule, but the following may be used as a guide:

Disease	Age for Immunization
Polio	2, 4, 18* months; booster ages 4-6
Measles Mumps Rubella (German Measles)	Usually given together: 15 months
Diphtheria Pertussis (Whooping Cough) Tetanus (Lockjaw)	Usually given together:2, 4, 6, 18* Mon.
Boosters:	
Pertussis	Between ages 4-6
Tetanus	Every 10 years throughout life
Diphtheria	Between 14-16
Hemophilus b Poly-saccharide Vaccine	24 months (can be given at 18-23 months for children in groups who are thought to be at risk of disease, i.e., day care center attendees)

* = The most current schedule published by the Centers for Disease Control recommends that the third Polio dose and the fourth DPT dose be given at age 15 months.

Services for Immunizations

Immunizations are available through many sources:

- Private physicians and clinics;
- Community health centers. (Such centers utilize a sliding scale fee for the medically indigent and accept Medicaid patients);
- The Child Health Screenings in local health departments;
- The state's high-risk infant follow-up program conducted through the local health departments; and
- The high-risk follow-up programs in St. Louis (Regional Maternal-Child Health Council) and in Kansas City.

Observed Symptoms of Health Problems in Children

This section is reserved for observed symptoms of health problems in children that might indicate dietary deficiencies, environmental poisons or diseases.

It is important to remember that the Children's Division (CD) Children's Service Worker is not expected to diagnose medical conditions, but to be aware of signs and symptoms that might indicate a medical problem.

The primary service for suspicion of any of the below (or other) serious medical conditions is referral to a competent medical specialist for further screening or diagnosis of the child. This may range from a county or private public health nurse to physicians available at public agencies or in private practice.

Qualified medical personnel should conduct diagnoses. Several sets of observable symptoms that the Children's Service Worker might be alerted to are presented.

Anemia

This is a blood disorder characterized by a lower than normal hemoglobin concentration or volume of red blood cells. Nutritional anemia is most common and is characterized by inadequate intake of certain nutrients-iron, folacin, vitamin B-12, protein, vitamin C, vitamin E and copper. Although the Children's Service Worker is not expected to diagnose anemia in children, certain signs may lead to suspicion of anemia.

Suspicion of anemia may arise from knowledge of the family's dietary practices. Diets missing vegetables and meats high in iron, for example, can lead to anemia. Symptoms or indicative signs of anemia include:

- Pallor;

- Weakness or fatigue;
- Irritability;
- Decreased attention span;
- Delayed motor development;
- Poor muscle tone;
- Inflammation of the mouth and/or tongue;
- Inability to swallow or difficulty in swallowing;
- Jaundice or beeturia (red urine).

The primary service for suspicion of anemia is a referral to a competent medical specialist for further screening or diagnosis of the child. Other referrals that can be made for cases of anemia include:

- Mothers and children who meet income eligibility criteria may be eligible for the Women, Infants and Children (WIC). This program is offered through the county health departments throughout the state. Anemia is one of the criteria for eligibility and is discovered through a medical examination prior to entry in the program;
- Homemaker or parent-aide services that include training on food purchasing, preparation, and efficiency for families where the basic problem is one of which foods to serve;
- A referral to the FSD for food stamp eligibility determination and a referral to other community food resources, such as the Community Action Agencies.

Infections

Another health indicator immediately observable by the CD worker is infections. As in the case of anemia, Children's Service Workers are not in a position to make diagnoses of medical conditions. Visible skin infections, however, may be indicative of a number of problems associated with child abuse and neglect, including improper infant care, poor sanitation, improper nutrition, lack of proper clothing (i.e. diapers in infants), lack of proper laundry facilities, and so on. Signs of infections will include open sores that are untreated or show evidence of infection (red or with pus) and skin rashes.

Another area of possible infection that may have serious consequences is the ear. Ear infections will often be accompanied with complaints of earaches.

Lead Poisoning

The source of lead poisoning most likely to be related and most observable is peeling and chipping paint in housing more than 30 years old. This can be observed by the Children's Service Worker during a home visit. Other sources that are less observable and less easily related are industrial sites that emit lead, lead pipes in the home, contaminated household dust and soil around the house, and lead based gasoline. An observable source, that has come to light more recently, is fumes produced by old painted wood being burned in wood burning stoves. For some inner city poor, the only free source of wood for their stove may be lumber from old houses. The ashes that result may also be highly toxic.

Symptoms and signs of lead toxicity are:

- Fatigue;
- Pallor;
- Malaise;
- Loss of appetite;
- Irritability;
- Sleep disturbance;
- Sudden behavioral change;
- Developmental regression.

Low level lead poisoning has recently been shown to be correlated with hyperactivity in children.

Acute lead encephalopathy is characterized by these symptoms along with more extreme symptoms, including: coma, seizures, bizarre behavior, ataxia, apathy, lack of coordination, vomiting, alteration in the state of consciousness, and subtle loss of recently acquired skills. These symptoms, of course, constitute a medical emergency.

Only through a medical diagnosis can lead poisoning be clearly established. The problem is most acute for preschool children. The nutritional status of the child is significant in determining the risk of lead poisoning. Deficiencies in iron, calcium and phosphorous are directly correlated with increased blood lead levels.

The primary service for suspicion of lead poisoning is a referral to a competent medical specialist for further screening or diagnosis of the child. Other referrals that can be made for cases of suspected lead poisoning include:

- A large scale screening program exists in the city of St. Louis. Screening is also conducted in Springfield of the blood samples of children applying for WIC. Diagnostic services are available in the state and can be obtained through private physicians, through the state's child health conferences and through programs offered at the children's hospitals.

- In St. Louis City a publicly funded housing abatement program is utilized to assist in removing lead sources from homes where lead poisoning has been discovered. Elsewhere in Missouri such programs are not typically found. It is imperative, however, to remove the source of lead from children who have been diagnosed to suffer from lead poisoning. This may involve renovation of housing or moving.

Fetal Alcohol Syndrome

Fetal Alcohol Syndrome (FAS) is defined as birth defects or other abnormalities that may occur in some children whose mothers drank alcohol during pregnancy. Women are urged not to drink alcohol while they are trying to become pregnant and during pregnancy. These precautions will prevent FAS.

The following are the symptoms of FAS: (Many of these can be due to causes other than alcohol)

- Facial abnormalities:
  - Droopy eyelids;
  - Short eye slits;
  - Small, squinty, widely spaced or crossed eyes;
  - Upturned nose or nostrils;
  - Flat, wide nose bridge;
  - Narrow upper lip;
  - No groove between lip and nose;
  - Flat mid-face;
  - Small rounded chin and jaw in infancy;
  - Large, malformed ears;
  - Cleft lip or palate;

- Small size.

- Hand abnormalities:
  - Fingers or toes that are small, bent or joined;
  - Abnormal creases on palms.
- Brain damage
- Mental retardation
- Poor coordination
- Other abnormalities:
  - Hip dislocation;
  - Heart or kidney defects;
  - Minor genital abnormalities;
  - Club foot;
  - Excess hair during infancy;
  - Abnormal pigmentation.

Head Lice

Head lice are bloodsucking insects that are found on people's heads. They do not ordinarily live on any other creatures, and animal lice normally do not infest humans (However, do not automatically assume that this is not the case). The head louse is one of three kinds that live and feed on people, each having a preference for a certain part of the body. Head lice usually inhabit only the hairy surface of the scalp, preferring the nape of the neck and the area behind the ears.

These insect parasites are very small (one to two millimeters long about the size of a pinhead). They vary in color, depending on the coloration of the host.

They are usually darker on someone with black skin and hair than on someone with fair skin and light hair. They have hook-like claws and thumbs at the end of each of their six legs, with which they grasp the shaft of a hair.

Adult lice and lice in their immature form (nymphs) feed on human blood by stabbing an opening through the skin. They pour in saliva to prevent clotting; they can then continue to feed for a long time, if not disturbed.

Itching is the most common symptom of louse infestation. The bloodsucking and the injection of saliva cause it. Sometimes a secondary bacterial infection results from scratching.

Adult head lice are believed to have a life span of about one month. A female will deposit about three or four eggs per day during her lifetime, for a total of about 90. She attaches them firmly with a cement-like substance on a shaft of hair close to the scalp. The grayish-white, oval eggs called nits, hatch in about a week and emerge as nymphs. They are immediately able to crawl and mature in about eight or nine days.

A person examining someone for head lice can usually see the crawling forms and nits with the naked eye, but a hand magnifying glass and flashlight may be helpful. Like the adult forms, nits and nymphs are most commonly found at the nape of the neck or behind the ears. The nits are easiest to see. Inexperienced examiners sometimes confuse a globule of hair spray or a hair cast (a bit of loosened follicle encasing a hair shaft) with a nit. If a school child is being examined, the youngster may erroneously be kept home from school and treated unnecessarily.

Because of the cement-like substance the female uses to attach her eggs to the hair, empty egg cases can remain stuck for long periods of time, getting farther from the scalp as the hair grows. The old idea that empty egg cases can be removed with vinegar has proved false. The best way to get rid of them is to use a fine-tooth comb.

How Lice are Spread: Everybody, no matter how "nice and clean", is susceptible to infestation with head lice. All one has to do is to come in contact with someone who has them. Besides person-to-person contact, lice can be transmitted by inanimate objects, such as coats, caps, scarves, hair brushes, combs, towels, bedding, upholstered furniture or carpets. The length of a person's hair does not seem to be a factor in susceptibility or in spreading these parasites.

Treatment: Infested individuals and their personal articles (caps, combs, brushes, clothing, towels and bedding) should be treated. There are several shampoos on the market that will kill head lice. Some can be bought over the counter at the local drugstore; others require prescription. Treatment should be repeated in ten days to kill newly hatched lice.

Washable clothing and bed linens that have been in contact with the infested person should be machine washed with hot water and detergent and dried at high heat for at least 20 minutes to destroy nits as well as lice. Dry cleaning will also kill lice and eggs.

To disinfect combs and brushes, soak them for an hour in a quart of water with one and one-half tablespoons of Lysol. They can also be placed in hot water (150 degrees Fahrenheit) for five to ten minutes, if articles are made of materials that are not damaged by heat. Boiling is not necessary.

Other Health Problems

Symptoms of other health problems may include cold and flu-like symptoms that persist (coughing, diarrhea, etc.), tiredness and weakness not apparently related to nutrition.

Failure to thrive is a condition in infants and very young children characterized by inadequate growth that can result from medical conditions and also from incomplete or inappropriate nurturing.

Chronic Health Problems

The general welfare of the family can be severely affected by health problems and disabilities of family members. Besides the emotional strain, the problem may cause financial strain on the family. Also, needed health care may simply not be available in the area.

Chronic health problems and disabilities requiring hospitalization are more prevalent among lower income families. Children in poor families are at greater risk of disease and disability.

Chronic health problems include diseases or disabilities that continue for long periods of time. The types of problems to be considered here are those requiring special care, special equipment, or regular medical treatment. Also included are disabilities of the provider(s) in the family that preclude work.

In providing services to these families, the Children's Service Worker's first response should determine if all means of publicly and privately funded health care have been applied for and is being utilized, including Medicaid, Crippled Children's Services, and private programs oriented to various handicaps.

Respite care, if available for these special cases, should also be considered for cases of chronically ill or handicapped children.

Developmental Milestones to Age 5

Parents may obtain a developmental milestone chart from their child's physician and should observe their child to see if those milestones in development are achieved. Most children will achieve these milestones before the age shown for each group of items. If the child does not pass the milestones listed at each level, it may signal a developmental lag or problem. To adjust the checklist for premature birth, subtract the time of prematurely from the age of the child (up to age two).

If there is substantial deviation in development from the milestones and ages shown, the parent should consult the child's physician. Early attention to developmental delays can often prevent more serious problems as the child gets older.

Although every child develops at a different rate, Chapter 4, of this section, provides a developmental milestone chart as a general guide.

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